

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-12. (Canceled)

13. (New) A device for determining the state of a particle filter, comprising
- an acoustic source (1) for transmitting an acoustic signal (1.1) toward the particle filter (3),
 - an acoustic receiver (2) for receiving the acoustic signal (1.2) that has been changed by the particle filter (3), and
 - an evaluation unit (4) connected to the acoustic receiver (2) for evaluating the received acoustic signal (1.2).
14. (New) The device according to claim 13, wherein the acoustic source (1) is an engine, a whistle, or a speaker.
15. (New) The device according to claim 13, wherein the acoustic source (1) is embodied so that the producible acoustic signal (1.1) lies in the ultrasonic range.
16. (New) The device according to claim 14, wherein the acoustic source (1) is embodied so that the producible acoustic signal (1.1) lies in the ultrasonic range.

17. **(New)** The device according to claim 13, wherein the acoustic receiver (2) is a microphone.

18. **(New)** The device according to claim 14, wherein the acoustic receiver (2) is a microphone.

19. **(New)** The device according to claim 15, wherein the acoustic receiver (2) is a microphone.

20. **(New)** The device according to claim 13, wherein the acoustic source (1) is disposed on one side of the particle filter (3) and the acoustic receiver (2) is disposed on the other side of the particle filter (3).

21. **(New)** The device according to claim 14, wherein the acoustic source (1) is disposed on one side of the particle filter (3) and the acoustic receiver (2) is disposed on the other side of the particle filter (3).

22. **(New)** The device according to claim 15, wherein the acoustic source (1) is disposed on one side of the particle filter (3) and the acoustic receiver (2) is disposed on the other side of the particle filter (3).

23. **(New)** The device according to claim 13, wherein the acoustic source (1) and the acoustic receiver (2) are disposed on the same side of the particle filter (3).

24. **(New)** The device according to claim 14, wherein the acoustic source (1) and the acoustic receiver (2) are disposed on the same side of the particle filter (3).

25. (New) The device according to claim 15, wherein the acoustic source (1) and the acoustic receiver (2) are disposed on the same side of the particle filter (3).

26. (New) The device according to claim 20, wherein the acoustic source (1) and the acoustic receiver (2) are disposed on the same side of the particle filter (3).

27. (New) The device according to claim 13, further comprising an additional acoustic receiver (2), with one acoustic receiver (2) being disposed on one side of the particle filter (3) and the other acoustic receiver being disposed on the other side of the particle filter (3).

28. (New) The device according to claim 13, wherein the evaluation unit (4) is embodied so that it is able to evaluate the amplitude of the acoustic signal (1.2) and/or can compare the phase positions of the two acoustic signals (1.1, 1.2) to each other.

29. (New) A method for determining the state of a particle filter, comprising the steps of
utilizing an acoustic source (1) to transmit an acoustic signal (1.1) toward the particle filter (3),

utilizing an acoustic receiver (2) to receive the acoustic signal (1.2) that has been transmitted to and changed by the particle filter (3), and

utilizing an evaluation unit (4) to determine the state of the particle filter (3) based on this received signal.

30. (New) The method according to claim 29, further comprising the steps of evaluating the phase and/or the amplitude of the received acoustic signal (1.2).

31. (New) The method according to claim 29, wherein the acoustic source (1) produces a sinusoidal or pulse-shaped acoustic signal.

32. (New) The method according to claim 29, wherein the transmitted and received acoustic signals (1.1, 1.2) are used to determine the ambient temperature.